A Comparison of Two Methods
Of Trail Sign Interpretation
Blacklick Woods Metropolitan Park

Submitted by

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Pamela S. Dillon

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INTRODUCTION

Interpretation has been described as the art of making a subject matter come to life for a group of visitors (Cherem, 1975). It is "an educational activity which aims to reveal meaning and relationships through the use of original objects, by first hand experience, and by illustrative media, rather than simply to communicate factual information" (Tilden, 1957). It is usually performed on site, is informal in nature, and is goal-oriented towards motivating people to find out more about the subject matter. It is "designed to stimulate curiosity, not satisfy it"(Roller,1974).

There are a variety of services through which interpretation can be performed. An incomplete list might be composed of slide shows, displays, guided hikes, living history demonstrations, campfire talks, pamphlets, workshops, demonstrations, auto tours, guided tours and interpretive trails. This last type of service, the interpretive trail, will be the service to be evaluated in this project.

OVERVIEW

Interpretive services can be preformed on a site with or without the presence of a real live interpretor. Although the visitor experience is heightened and information retention is generally greater when the interpreting is done by a real person (Tilden, 1957) this, unfortunately, is not always feasible. Trail interpretation by signs and/or pamphlets has thus been devised in order to extend the outreach of the interpretive staff. The concern of this study is further narrowed down to involve only interpretive trail signs.

Of the two main categories of involvement - active and passive - interpretive trail signs have traditionally been of the latter category. Along the majority of interpreted trails of this type we find the traditional flat surfaced sign with one color of lettering and perhaps a picture. The wording states mainly factual information with interpretive techniques being employed in varying degrees. Very little has been done to actively involve the trail visitors in the interpreting. The only involvement, other than actively walking the trail and walking up to the sign had been the passive reading of the sign and the viewing, usually at a distance, the subject matter, As justified in the literature review, this I believe to be inefficient both from the standpoint of learning about the subject matter and from the standpoint of enjoyment. It appears that if a trail were developed which allowed the participants to actively involve themselves in order to recieve the information, that more information would be retained by the participants and a higher level of trail enjoyment would also exist.

STATEMENT OF THE PROBLEM

The purpose of the study was to determine whether a significant difference could be found in visitor response between two sets of trail interpretive signs, one employing the traditional trail sign and the other signs incorporating a degree of involvement. More specifically, the study centered on two subproblems;

1--To determine whether information retention is affected significantly between the two methods of presentations.

2--To determine whether enjoyment is affected significantly between the two methods of presentation.

ASSUMPTIONS

1--Knowledge can be measured through use of a mutiple choice test.

2--People responded to the questions honestly.

HYPOTHESIS

1) It was hypothesised that as people get more involved in the trail signs through participatory information retention will be increased significantly.

2) As people have the opportunity to get more deeply involved, their measure of enjoyment will increase.

LITERATURE REVIEW

Trail interpretation has been defined as "the problem of bringing the subject matter and audience together and communicating information and understanding that will make the walk enjoyable and appreciating" (Hendren, 1974). The need of interpretation is further justified by Hendren (1974) when he states: "Many people are not especially excited by looking at plants or seeing the signs of animal activity in the woods. Appreciation for such things grows through understanding and familiarization with the subject." Therefore, interpretation of the natural and cultural history of an area can add substantially to quality of the visitor's experience by working to aid the visitor's understanding and by providing chances for familiarization with the subject (Putney, 1973).

A highest quality of human experience should be the goal toward which all interpretation is aimed, however, it has been shown that the majority of interpretation "falls far short of its potential for enhancing (these) visitor experiences" (Field-Wagar, 1973). Cohen (1974) concludes "...that meaningful learning comes from having fun while experiencing learning situations that are totally involving." Lee, Leroy, and others (1970), point out "most real and lasting education comes from active participation on the part of the learner". "Education research has shown that efficiency of learning varies directly with the number of senses which are brought to use in an interpretive situation" (Shomon, 1968). Involvement is indeed viewed as a key in any educational experience weather it be in a formal setting or an informal situation such as an interpretive presentation (Roller, 1974; Spinelli, 1973; Leyh, 1974; Field-Wagar, 1974; Bennett, 1973; Shomon, 1964; Rocchio, 1973).

An important question to consider, therefore, is: Do we always choose the most exciting and involving way to relay our information to our visitors? "Do we consider how interpretation will reward these visitors (through involvment and enjoyment) or do we think of only what we feel should be communicated and how it should be communicated?" (Field-Wagar, 1973).

Some thought incorporating this theory of reward and involvment has been done concerning interpretive trail signs. Wilbur Shramm has found that weather a visitor reads an interpretive sign or not depends on what he has called the "fraction of selection". This formula, a relative one presently based mainly on personal observation and feeling, is described as follows:

$$\text{Fraction of selection} = \frac{\text{Expectation of Reward}}{\text{Effort Required}}$$

The larger the fraction for a particular sign, the more visitors will read it. Expectation of reward is increased when readers can identify with the meassage and come involved with it in some way, either physically, emotionally, etc. Reduction of the effort required involves cutting back on the actual number of the words in the text, adding pictures, using generous margins, shorter words and sentences, etc. (Sahrpe, 1976).

Visitors and leisure settings are diverse and a variety of different approachs will be required in order to enhance the various visitor experiences, however a system of reward incorporated in all types of interpretive services can have the twofold effect of enhancing the enjoyment level of the visitor and imprinting the point of the interpretation resulting in information retention. Field and Wagar (1973) found that "one of the dependable varities of human behavior is that people tend to persist in doing the things

they find enjoyable and rewarding." Indeed, a vital key to lasting education and value change at the gut level is active involvment and participation on the part of the learner (Lee, Leroy, and others, 1970).

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PROCEDURE

This survey-experiment took place in Blacklick Woods, a Columbus and Franklin County Metropolitan Park. Blacklick Woods is located on Livingston Avenue in Reynolsburg, Ohio, just off Interstate 70 on Columbus' east side. The park is developed with several shelters for picnics and group gatherings, a trading post, a vending area, comfort stations, etc. It also includes a trailside nature interpretive center with a well developed trail system (see map, Appendix I).

For experimental control and simpliciy only a segment of one of the trail loops was used. This segment is identified as the section located to the east of the two "x's" on the map and are referred to as the Experimental Trail. Its boundary landmarks consist of the Interpretive Nature Center to the North and the fork between the Experimental Trail and the Beech-Maple Trail to the South. Justification for selection of this segment can be seen upon further study of the map. At these two points, the suveyees were sure to have walked (uninterrupted by the possibility of taking side trails) the Experimental Trail. Because of the great popularity of the Interpretive Nature Center, however, the experimental group was further limited to only those people walking the trail from south to north. In this way those completing the interview would not have yet visited the nature center. I did not wish to have them considering these other interpretive services and, perhaps, confuse the trail signs with those around the center while completing the interview. Although in some ways this point for interviewing was ideal in that it enabled the interviews to be done a mere fifty feet from the location of the last stop yet was

almost completely hidden from this last stop, a problem was also posed in that the animal cages and the Nature Center could be seen from this location which proved to be disastrous while interviewing people who were watching or caring for small children.

CONDITION OF THE TRAIL

The Experimental Trail segment is approximately 1300 feet or one-forth mile long. It is paved, thus enabling usage by people restricted to wheelchairs and establishing a relatively high trail carrying capacity. The trail width is approximately five feet. Access to the trail is either from the interpretive center or from the picnic-trading post area.

The trail system of Blacklick Woods has been sparsely interpreted by tree informational markers. Two such markers, interpreting a Shagbark Hickory and a White Ash, are in place on the Experimental section of the trail. Being permanent these two markers remined stationary and unchanged throughout the duration of the experiment. These two markers, in fact, were included in the experiment as control markers for the second part (PhaseII).

EXPERIMENTAL APPARATUS

The experiment took part in two phases. The first phase consisted of evaluation of the "traditional" method of trail sign interpretation. This segment shall be referred to as Phase I. The second portion introduced the element of involvment into the system. This segment shall be referred to as Phase II.

PHASE I

A series of five interpretive trail signs were established along the Experimental Trail. These signs were all of the tree informational type used presently by the Columbus and Franklin County Metropolitan parks. These signs are two colored (black on either gold or silver), one dimensional, and employed pictures of such things as the tree's leaves and/or fruit being interpreted. The signs were presented to convey the traditional approach to trail sign interpretation, that of the walk along-see sign-stop-read sign-resume walking along trail sequence most commonly found.

A survey of thoughts, opinions, etc. of the trail walkers was then conducted upon completion to the Experimental Trail Walk. The survey was taken from only those people walking from the south to north direction of the trail, i.e. from the Beech Maple Trail fork to the nature center. The survey questioned only about the interpretive trail signs and did not include questions pertaining to any other scope of interpretive services found in and around the area. See Appendix II for questionaire.

A small amount of demographic information was obtained for more complete data analysis and for additional trail use analysis for the park system.

PHASE I SIGNS

- BLACK WALNUT Juglans nigra - Since colonial times the highly prized wood of this tree has been used in cabinets and gun stocks. The ridged, hard-shelled nuts contain edible kernals that add distinctive flavor to candies and cakes. The husk covering these nuts contains a strong stain used by pioneers to produce a yellow-brown dye. Walnut roots secrete juglone, a substance toxic to many plants.

- SHAGBARK HICKORY Carya ovata - Old specimens are easily recognized in all seasons by long, narrow strips of gray bark which gives this tree its shaggy appearance and its name. This characteristic attracts insects which overwinter or lay eggs under loose strips of bark. The strong but elastic wood makes excellent tool handles and agriculture implements and when used in the smokehouse gives hams and bacon a distinctive flavor. Fox and gray squirrel populations in the past were so dependent on hickory nuts that pioneers reperted "migrations" of squirrels during years of nut crop failures.

- WHITE ASH Fraxinus americans - is the tallest, most commerically valuable member of the American Ash trees. Perhaps a baseball bat or the handle of a tool you have used was made from the hard yet elastic wood. The winged, bullet shaped seeds scatter with the wind, often making stands of young pioneer trees along forest field borders.

- AMERICAN HORNBEAM Carpinus caroliniana - You may know this tree by another name as it has many. "Muscle wood" refers to the fluted vertical trunk ridges which resemble a rippled muscle. The extremely heavy, hard and durable wood was named "ironwood" by the pioneers. They shaped it, when they could, into levers and tool handles. Although not related to American beech the color and texture of the bark have given it the name "blue beech". Squirrels, grouse and other birds sometimes use the nutlet seeds, catkins or buds for food.

- POISON IVY Rhus radicans - can be found growing on the ground or as a hairy vine on tree trunks. The three-parted leaf turns brilliant colors in the autumn. Urushiol, an oily substance produced by the plant, causes an itching rash on many people who come in contact with poison ivy. Despite an infamous reputation, the plant is a valuable wildlife food. Tiny white berries that persist on the vines through winter provide emergency food for many birds and deer are often seen browsing on the foilage. Luxuriant growth of this plant along park trails provides a good reason for not straying from established trails.

PHASE II

Phase II consisted of the same five objects being intrepreted along the experimental trail as in Phase I but the interpretation in in Phase II employed the element of involvement on three of the five signs. Answers were hidden, questions raised, actual objects displayed with these signs in order to facilitate involvement from the visitor.

Of those people walking the trail approximately every fifth hiker was asked if they would mind donating a few minutes of their time for a quick informal interview about their trail experience. This interview was the same for both phases of the experiment. Only those people over twelve years of age were questioned. A minimum of 50 usable interviews per Phase was accepted. A usuable interview is defined as one in which all questions were given an answer by a person over 12 years of age that had hiked the trail. Only one person in any groups answered per interview. (SEE Appendix II.)

PHASE II SIGNS

White Ash ----same as Phase I

Shagbark Hickory ---same as Phase I

Poison Ivy ---Metal sign same as Phase I

Participatory addition; Question door

Outside; "Poison Ivy, What's it good for?"
Inside; "Wildlife food"

American Hornbeam --Metal sign same as Phase I

Participatory addition; Question door

Outside; "Tree Stumper, This tree has many names. Can you name them?"
Inside; Same as Phase I, Metal sign

Black Walnut---Metal sign same as PhasI

Participatory addition; Touch and see panel

Panel wording; "Nature's Paint Brush-Dyed with Walnut Husk Dye"

PHASE I SIGN CONSTRUCTION

There are three categories for describing sign construction; temporary, seasonal and permanent. Temporary signs are those made to facilitate ease in hanging. They are usually changed or moved weekly. They are usually of relatively weak construction and are light and easy to carry.

Seasonal signs are those made more durable in order to remain in place for several months. They are not durable enough to remain in place over long periods of time and through all kinds of weather. Signs which are designed to remain in place over long periods of time are referred to as permanent signs.

The signs found along the Experimental Trail were of two types, seasonal and permanent.

The two signs that were in place at the onset of the experiment are permanent. The signs are photostated on steel plates which are in turn riveted onto another steel plate which has been set at a 45° angle. This plate has been welded onto a metal post. The metal post is set into a hole approximately 2 feet in diameter and 2 feet deep then anchored with 100 pounds of concrete.

The other 3 signs along the trail were seasonal signs being made to hold up over a much shorter period of time. Self-adhesive aluminum plates were stuck onto a mason board backing. This wooden back had been epoxy glued onto an aluminum "L" brace. A three foot creosoted 2x2 post was then pounded into the ground at the interpretive site. The sign was then screwed onto the post and the brace bent back to a 45° angle.

Although the sigh construction seemed adequate for a temporary sign it took only two days for the signs to be torn down

or stolon. Since Phase I of project was not then completed I made a second set of Phase I signs exactly as described above. These, however, I did not leave on the site when I was not there. The posts were in the ground pretty solid so I simply unscrewed the top brace each time and took the signs with me.

PHASE II SIGN CONSTRUCTION

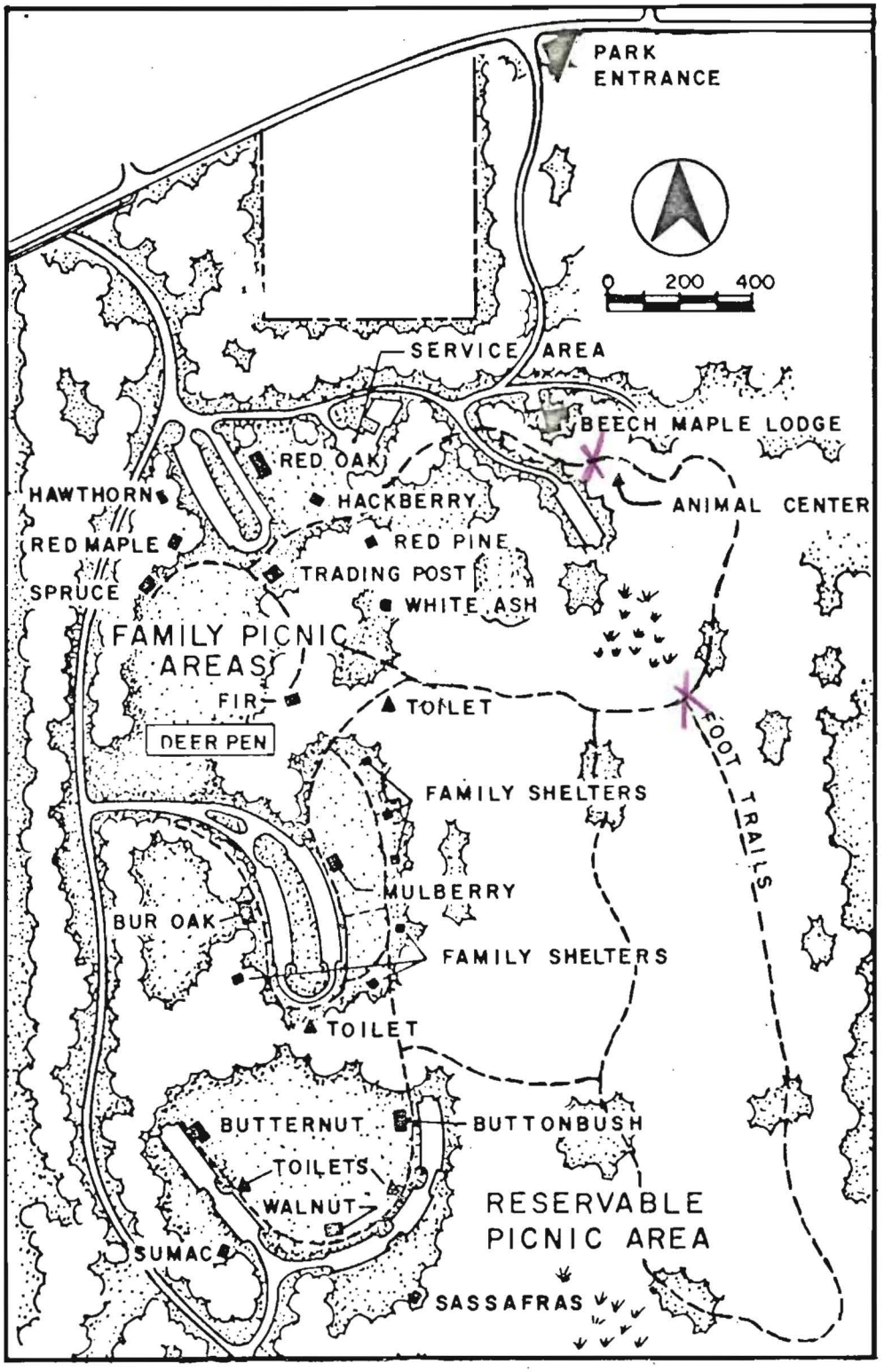
Z The Phase II signs employed the same construction material with some necessary later changes in construction techniques.

My first group of Phase II signs were made once again by sticking the metal sign to the wooden back which was exposy glued to the brace and screwed onto the post. Two of the Phase II signs had doors which were screwed in with small brass screws. The third sign had a touch and see panel which was stapled to a heavly painted and varnished piece of poster board and cemented onto the board. After being put up these three signs lasted 20 minutes. The relatively weak construction, coupled with the rough handling by the park visitors and the increased amount of handling because of the increased involement were just too much for them.

When reconstructiong these Phase II signs, asthetics was sacrificed for sturdiness and bolts were put directly through the sign and wood to fasten the sign to the brace and post. Pop Rivits were substituted for the torn out small brass screws of the first set of signs. Epoxy glue was used to glue on the touchand see panel inteaa of cement. The signs held out for a longer period of time throughout the duration of the experiment except for the Tree Stumper door which I found was ripped off the Pop Rivets when I went to take the signs down.

APPENDIX

BLACKLICK WOODS METROPOLITAN PARK



X - designates boundary of Experimental Trail

APPENDIX II

METROPOLITAN PARK SURVEY

((PUT ANSWER NUMBER BESIDE QUESTION NUMBER ON RESPONSE CARD))

1) Day and Date

2) Time

3) Sex

4) Age group 1) 12-18 2) 19-25 3) 26-35 4) 36+

5) Occupation (optional)

6) What was your main reason for coming to the park?
   1) group outing
   2) picnic
   3) nature study
   4) other (please specify)

7) What was your main reason for hiking the trail?
   1) like to walk
   2) nature study
   3) boredom or relaxation
   4) other (specify)

8) On a scale of one to six, how would you rate your enjoyment of your walk on the trail?
   1- did not enjoy it at all
   2
   3
   4- it was all right, but nothing fantastic
   5
   6- enjoyed it very much, would hike it again

9) How many of the trail signs (about the trees) did you read completely through?

none 1 2 3 4 5

IF NONE, ONE OR TWO WERE READ, ANSWER QUESTION BELOW (9a).

IF THREE OR MORE WERE READ, PLEASE GO TO NEXT PAGE.

9a) What was your major reason for not reading the signs?
   1. didn't notice them
   2. had no interest in reading them
   3. signs were too long, took too much time
   4. signs were uninteresting
   5. was preoccupied with something else

THANK YOU VERY MUCH!!

10) In order for the park district to evaluate the effectiveness of our trail signs, we are interested in finding out how much information you remember after reading the signs. Please quickly read the following questions and mark the response card accordingly.

POISON IVY IS GOOD FOR-*
- 1a- medicine
- 1b- nothing
- 1c- wildlife food
- 1d- making rope

AMERICAN HORNBEAM IS ALSO KNOWN AS -
- 2a- Ironwood because of its hard wood
- 2b- muscle wood after the bark ridges
- 2c- Blue beech after the bark color
- 2d- all of these

THE TALLEST, MOST COMMERICALLY VALUABLE MEMBER OF THE ASH TREE FAMILY IS -
- 3a- Green ash
- 3b- White ash
- 3c- Purple ash
- 3d- scarlet ash

SHAGBARK HICKORY-
- 4a- gets its name from its shaggy appearance
- 4b- is used in smoke houses to smoke meat
- 4c- is used for making tools
- 4d- all of the above

WHICH OF THE FOLLOWING IS FALSE ABOUT BLACK WALNUT -
- 5a- the nuts are used in cakes and candies
- 5b- the nut husk produces a red dye
- 5c- the wood is used for fine cabinets
- 5d- the roots produce a substance toxic to some plants

11) Did you know any of the above information before reading the signs? If so, what?

THANK YOU VERY MUCH!!!

RAW DATA PHASE I

Question	# of Persons	%
3)Sex		
Males	25	48.1
Females	27	51.9.
4)Ages		
12--18	17	25.8
19--25	19	36.5
26--35	11	21.2
36--++	9	17.3
5)Occupation		
Student	17	32.7
Housewife	7	13.7
Bussiness	3	5.8
Store	3	5.8
Secretary	3	5.8
Mechanic	3	5.8
Civil Service	1	1.5
Other	15	28.9
6)What was your main reason for coming to the park?		
Group function	19	36.5
Picnic	12	23.1
Nature study	4	7.7
Other	17	32.7
7)What was your main reason for hiking the trail?		
To walk	18	34.6
Nature study	10	19.2
Bordom or relaxation	14	26.9
Other	10	19.2
8)On a scale of one to six, how would you rate your enjoyment of the trail?		
1	2	3.8
2	0	0.0
3	8	15.4
4	7.	13.5
5	9	17.3
6	26	50.0
9)How many of the trail signs along the trail did you read completely?		
0	22	42.3
1	6	11.5
2	7	13.5
3	5	9.6
4	1	1.9
5	11	21.2

RAW DATA PHASE I con't.

	# of persons	%
9a) What was your major reason(s) for not reading the signs?		
Did not notice	3	8.8
No interest	8	23.5
Too long	2	5.9
Uninteresting	1	2.9
Preoccupied	20	58.8

***67% of the people answered 9a.
32.6% answered the questions in part 10.

9a) *The number of signs the people read, answered 9a but not 10.		
1	0	0.0
2	7	20.6
3	3	8.8
Zero	21	61.8

10) Questions concerning interpretive signs. (*indicates correct resp.)		
1a	0	0.0
1b	5	29.4
1c*	12	70.6
1d	0	0.0
2a	4	22.2
2b	5	27.8
2c	3	16.7
2d*	6	33.3
3a	1	7.1
3b*	12	85.7
3c	0	0.0
3d	1	7.1
4a	9	56.2
4b	0	0.0
4c	0	0.0
4d*	7	43.8
5a	3	15.8
5b*	11	57.9
5c	2	10.5
5d	3	15.8

RAW DATA PHASE II

Question	# of Persons		%
3)Sex	Males	31	57.4
	Females	23	
4)Ages			
12--18		26	48.1
19--25		10	42.6
26--35		11	20.4
36--++		7	13.0
5)Occupation			
Student		13	24.1
Not working & other		11	20.4
Secretary		3	5.6
Construction		6	11.1
Housewife		4	7.4
Nurse		1	1.8
Civil Service		1	1.8
Sales		5	9.3
Teacher		2	3.7
Mechanic		1	1.8
Service		7	13.0
6)What was your main reason for coming to the park?			
Group function		11	20.4
Picnic		29	53.7
Nature Study		5	9.3
Other		9	16.6
7)What was your main reason for hiking the trail?			
To walk		24	44.5
Nature study		12	22.2
Boredom or relaxation		8	14.8
Other		10.	18.5
8)On a scale of one to six, how would you rate your enjoyment of the trail?			
1		0	0.0
2		1	1.9
3		1	1.9
4		5	9.3
5		9	16.6
6		38	70.3
9)How many of the trail signs along the trail did you read completely?			
0		11	20.4
1		4	7.4
2		11	20.4
3		18	33.3
4		5	9.3
5		5	9.3

RAW DATA PHASE II con't.

	# of Persons	%
9a) What was your major reason(s) for not reading the signs?		
Did not notice	3	9.7
No interest	6	19.4
Too long	5	16.1
Uninteresting	0	0.0
Preoccupied	17	54.8

***57.4% answered 9a
42.6% answered the questions in part 10.

9a) *The number of signs the people read, answered 9a but not 10.		
0	11	44.0
1	2	8.0
2	7	24.0
3	3	12.0
4	1	4.0
5	1	4.0

10) Questions concerning interpretive signs. (* indicates correct resp.)		
1a	3	9.1
1b	6	18.2
1c*	24	72.7
1d	0	0.0
2a	4	21.1
2b	4	21.1
2c	6	31.5
2d*	5	26.3
3a	1	4.2
3b*	22	91.6
3c	1	4.2
3d	0	0.0
4a	5	21.7
4b	5	21.7
4c	2	8,7
4d*	11	47.9
5a	0	0.0
5b*	6	24.0
5c	3	12.0
5d	16	64.0

STATISTICAL ANALYSIS

The Mann-Whitney U-test was used to evaluate each of the following groups of raw data. This test was used following the advice of the Statistical Consultant Service for Baker Systems, incorporated in Baker Hall. The test is used to evaluate the homogenity of two groups. A resulting probability of greater than one-hundredths (0,1) proves this hypothesis while probability of less than 0.1 disproves the hypothesis that the two groups are egual. In order for the hypothesis of this study to be supported statistically, therefore, the probability should be less than 0.1. (Probability number obtained from Mann-Whitney probabilty tables in Statistics Laboratory, Baker Hall 560).

-ENJOYMENT RATING

PHASE I (%)	PHASE II (%)	
3.8	0.0	
0.0	1.9	U-test = 14.50
15.4	1.9	
13.5	9.3	Probability = 0.32
17.3	16.6	
50.0	70.3	

(Study's hypothesis that enjoyment factor would be raised in Phase II is not supported)

- NUMBER OF SIGNS READ

PHASE I (%)	PHASE II (%)	
42.3	20,4	
11.5	7.4	U-test = 16.00
13.5	20.4	
9.6	33.3	Probability = 0.40
1.9	9.3	

average signs read/ person hiking trail

1.8	2.3

(StudY's hypothesis that a significant number more of Phase II signs would be read is not supported).

INFORMATION RETENTION

Question number	Phase I (%)	Phase II (%)	U-test	Probability
1a	0.0	9.1		
1b	29.4	18.2		
*1c	70.6	72.7	7.0	.44
1d	0.0	0.0		
2a	22.2	21.1		
2b	27.8	21.1		
2c	16.7	31.5	7.0	.44
*2d	33.3	26.3		
3a	7.1	4.2		
*3b	85.7	91.6		
3c	0.0	4.2	6.5	.40
3d	7.1	0.0		
4a	56.2	21.7		
4b	0.0	21.7		
4c	0.0	8.7	7.0	.44
*4d	43.8	47.9		
5a	15.8	0.0		
*5b	57.9	24.0		
5c	10.5	12.0	8.0	.56
5d	15.8	64.0		

(Analysis shows that all groups are homogeneous, therefore, study hypothesis that learning retention would be greater is not supported.)

CONCLUSION

As determined by the probability figures in the preceding statistical analysis, the following conclusions have been reached:

1. The hypothesis stating that as people get more involved in the trail signs through participation, information retention will be increased was not supported.

CONCLUSION con't.

2. The hypothesis stating that as people have the opportunity to get more deeply involved, their measure of enjoyment will increase was not supported.

DISCUSSION

Although the figures show no significance in variance between the two sets of data, I feel it is necessary to interject some personal comments and observations.

Because of lack of skill, lack of financial resources, lack of equipment and time, and at the suggestion of Mr. Phil Feldmeier, Supervisor of Interpretive Programs for the Columbus and Franklin County Metropolitan Parks, I agreed to use and evaluate the signs that the park district is presently using in all of their parks. I feel now that this hindered the experiment in that many people had seen the signs a number of times before and they simply did not care to read them again. Perhaps I should have added a Phase III to my experiment to see if any noticeable difference could be found between use of the traditional park district sugns and use of my own original set of tradition signs.

Because of the nature of the second phase, I thought it was imperitive that I use the same information as in Phase I, however, involvement possibilities by using the Metropolitan Park signs with their limited subject matter (trees) were greatly restricting.

As to degree of involvement incorporated in the Phase II signs, I feel it was only minimal to fair. So many other possibilities were available, but once again, financial and

administrative restrictions and fear of vandalism found these to be impractical.

Although the data points to disproof of the hypothesis, personal observation leaves certainty that the hypothesis is not a false one. For example, while putting up the Phase I signs, lettle to no interest from passers by was noticed in what I was doing. But, when putting up the Phase I signs EVERYTIME people stopped and asked if they could peek under the door. Two ladies even stepped off the paved trail into the mud and walked behind me in order to look under the door of the Poison Ivy sign which was lying on the ground.

Certain other factors I feel also affected the outcome drastically. The inability of handing out questionaires resulting in the necessity of slow personal interviews not only caused great reduction in survey number but, I'm sure, also had some effect on the honesty of answers. The lack of knowledge on my part about statistics and statistical analysis could have been a factor, and perhaps my own changing personality while interviewing the different people could have affected their answers.

The question on enjoyment was also a quite relative thing and no real boundary was set in order for people to rate their answers accordingly.

Much, much room for improvement is left in this study. I feel it would be very worth while for a person with a background in interpretation but also psychology, statistics, etc. to do on a much more extensive and more controlled scale.